Assignment #5:
Due March 22

1. Exercise 15.2-1

2. Consider the activity selection problem discussed before but with profits. Activity \( i \) (= 1, 2, ..., \( n \)) has three values associated with it. \( s_i \) the start time, \( f_i \) the finish time and \( p_i \) the profit. We want to select a subset of nonoverlapping activities whose total profit is maximum. Show how to use dynamic programming to solve this problem.

3. Given a string \( A[1, 2, ..., n] \) of numbers, find a subsequence \( B[1, 2, ..., m] \) with \( B[i] < B[i + 1] \) for \( i = 1, 2, ..., m - 1 \) such that the value of \( m \) is maximum.

4. Problem 15-6

5. 16.2-2